



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/581,614	06/05/2006	Beat Frefel	5847	5475
26/936 7590 12/29/2008 SHOEMAKER AND MATTARE, LTD 10 POST OFFICE ROAD - SUITE 100 SILVER SPRING, MD 20910				
EXAMINER				
STIMPERT, PHILIPPEARL				
ART UNIT		PAPER NUMBER		
3746				
MAIL DATE		DELIVERY MODE		
12/29/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/581,614

**Applicant(s)**

FREFEL, BEAT

**Examiner**

Philip Stimpert

**Art Unit**

3746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 June 2006 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-893)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date 6/5/2006

**DETAILED ACTION**

***Information Disclosure Statement***

1. The examiner finds no copy of the Swiss patent to Anderberg et al. (CH 123787), cited in the Information Disclosure Statement filed 5 June 2006. As such, that reference has not been considered. The remaining references cited have been fully considered, as noted in the attached PTO-1449 form.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Regarding claim 2, the claim recites that "the plates are in the form of disks and bound the working chambers at the end." This is indefinite in several respects. First, "the end" lacks antecedent basis in the claim. Second, as shown in the drawings, the disks bound the chambers at both axial ends thereof, rather than a single end. Inasmuch as the claim refers to multiple plates/disks, but does not describe this structure, it is indefinite.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-3 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Budzich (US 4,368,008) in view of Collins (US 2,246,932).
7. Regarding claim 1, Budzich teaches a piston compressor for compressing gaseous media in several working chambers (16, 17, 18, 20), the compressor having a stepped piston (15, 21) containing a first piston part (15) and a coaxial second piston part (21), a first cylinder (11) for holding the first piston part (15) and forming a first working chamber (17), and a second cylinder (13) holding the second piston (21) and forming a second working chamber (20), with the second piston part (21) having a smaller diameter than the first (15), the second piston passing through an opening in the end of the first cylinder (11) and being arranged at one (right ) end of the first piston (15) and forming the front end of the stepped piston, with the second piston part (21) forming a cylindrical working chamber (20), and the first piston part forming an annular working chamber (17). Budzich does not teach that the cylinders are closed by plates with valve arrangements, and does not teach particular valve arrangements. Collins teach a compressor having a double-acting piston (6) arranged in a cylinder (5) that is closed by plates (7 and 8) having valve arrangements therein. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the cylinders of the pump of Budzich with plates as taught by Collins in order to provide the check valves contemplated by Budzich.
8. Regarding claim 2, Collins teaches that the plates (7, 8) are in the form of disks, and bound the working chambers (of Budzich in the present combination).

9. Regarding claim 3, Collins teaches that the plates are provided with inlet and outlet valves (see Fig. 1).
10. Regarding claim 6, Collins teaches that the valves are individual valves (such as 18) with spring resetting (as shown in Fig. 1).
11. Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Budzich in view of Collins as applied to claim 3 above, and further in view of Schlossarczyk et al. (US 6,257,838).
12. Regarding claim 4, neither Budzich nor Collins teach lamellar valves. Schlossarczyk et al. teach a valve plate (9) including lamellar valves (col. 2, ln. 66). One of ordinary skill would appreciate that such a valve would be relatively easily constructed and assembled to a pump such as that of Budzich, and that it would provide simple, reliable, and independently acting valves of the type contemplated by Budzich. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use lamellar valves as taught by Schlossarczyk et al. in the pump of Budzich as modified by Collins, in order to take advantage of the simple and reliable nature of those valves.
13. Regarding claim 5, the lamellar valves taught by Schlossarczyk et al. constitute individual tongue valves.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip Stimpert whose telephone number is (571)270-1890. The examiner can normally be reached on Mon-Fri 7:30AM-4:00PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Devon Kramer can be reached on (571) 272-7118. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Devon C Kramer/  
Supervisory Patent Examiner, Art  
Unit 3746

/P. S./  
Examiner, Art Unit 3746  
22 December 2008